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Phase (check one)	Type (check one)
<input checked="" type="checkbox"/> Initial Site Investigation	<input type="checkbox"/> Work Scope
<input type="checkbox"/> Corrective Action	<input checked="" type="checkbox"/> Technical Report
<input type="checkbox"/> Feasibility Investigation	<input type="checkbox"/> PCF Reimbursement Request
<input type="checkbox"/> Corrective Action Plan	<input type="checkbox"/> General Correspondence
<input type="checkbox"/> Corrective Action Summary Report	
<input type="checkbox"/> Operations & Monitoring Report	

**Report of Initial Site Investigation
Colonial Supply of Vermont
Woodstock Avenue
Rutland, Vermont**

**Latitude: 43°37'19.7"
Longitude: 73°57'11.8"**

Prepared for:

**MR. LOU MAROZZI
COLONIAL PLUMBING & HEATING
130 Railroad Avenue Extension
Albany, New York 12205
(518) 459-6000**

Prepared by:

**THE JOHNSON COMPANY, INC.
100 State Street, Suite 600
Montpelier, Vermont 05602
(802) 229-4600**

THE JOHNSON COMPANY, INC.

Environmental Sciences and Engineering

October 3, 1995

Ms. Linda Elliott
Hazardous Materials Management Division
Vermont Department of Environmental Conservation
103 South Main Street/West Building
Waterbury, Vermont 05671-0404

Re: Report of Initial Site Investigation; Colonial Supply of Vermont; Woodstock Avenue; Rutland, Vermont. Site #951798. JCO No. 3-0302-1.

Dear Linda:

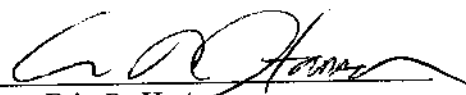
We have completed our site investigation for the referenced project in accordance with our July 12, 1995 workplan provided to the Hazardous Materials Management Division. Our investigation report is presented herein. We apologize for the delay of this report; we were awaiting the analytical results from Scitest Laboratory Services who is working out the bugs with a new analytical results reporting software system.

If you have any questions, please do not hesitate to call.

Sincerely,

THE JOHNSON COMPANY, INC.

By:



Eric R. Hartson
Project Hydrologist

cc. Lou Marozzi

Reviewed By: dmm
i:\projects\3-0302-1\invstgn.rpt September 27, 1995 erh

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EXECUTIVE SUMMARY

The Johnson Company has completed a preliminary site investigation at the Colonial Supply of Vermont (a plumbing supply business) property located on Woodstock Avenue (U.S. Route 4) in Rutland, Vermont. A 550-gallon underground storage tank used to store diesel fuel was removed by another contractor earlier this year and, although only a small amount of diesel fuel contamination was noted in the surrounding soils, gasoline odors and high volatile organic compound vapor readings were obtained from the underground storage tank excavation. Because of these observations, the Vermont Department of Environmental Conservation's Hazardous Materials Management Division required Colonial Supply of Vermont to perform an initial hydrogeologic site investigation at the property. Colonial Supply of Vermont contracted The Johnson Company to perform this work.

We performed a site investigation that included a metal detector survey to help determine whether any abandoned underground storage tanks exist on the property, a receptor survey, and limited risk assessment to determine the affect that any noted soil and groundwater contamination may have on nearby receptors. The investigation also included soil vapor screening and groundwater monitoring well installation at various locations on the property followed up by groundwater sampling and analysis to help determine the source(s), degree, and extent of any contamination noted at the property.

The metal detector survey indicates, to the best of the instrument's capability, that there are no abandoned underground storage tanks on the property. The receptor survey/limited risk analysis indicates that there are no sensitive receptors in the local area hydraulically downgradient of the property. The closest water supply well is located on an adjacent property approximately 200 feet hydraulically upgradient (i.e., southwest) of the property. A former gasoline station, currently an auto repair business, exists on the adjacent property towards the southwest.

We oversaw the installation of three monitoring wells at hydraulically upgradient and downgradient portions of the property. A conduit created by a buried utility trench located in front of the building on the property, running parallel to Woodstock Avenue, likely creates an area of preferential groundwater flow towards the northeast. Screening of soils for volatile organic compound vapors and groundwater samples collected from the completed monitoring wells indicate that very little soil and groundwater contamination by volatile organic compounds exists at the hydraulically upgradient portion of the property or at a downgradient monitoring well located in front of the building on the property near the location of the former underground storage tank. The groundwater sample from the other downgradient monitoring well, located along the edge of the conduit created by the utility trench in front of the building, exhibited high concentrations above enforcement standards of several volatile organic compounds typically found in gasoline/petroleum products and used as solvents. The source of this contamination may be from off-site.

We recommend that two additional monitoring wells be installed to better define the extent and possible source(s) of groundwater contamination by volatile organic compounds that have been detected. We also recommend sampling the neighboring water supply and analyzing the sample for volatile organic compounds. This additional work should help clarify whether there is an on-site contamination source, or if an off-site source is primarily responsible for the noted volatile organic compound contamination.

1.0 INTRODUCTION

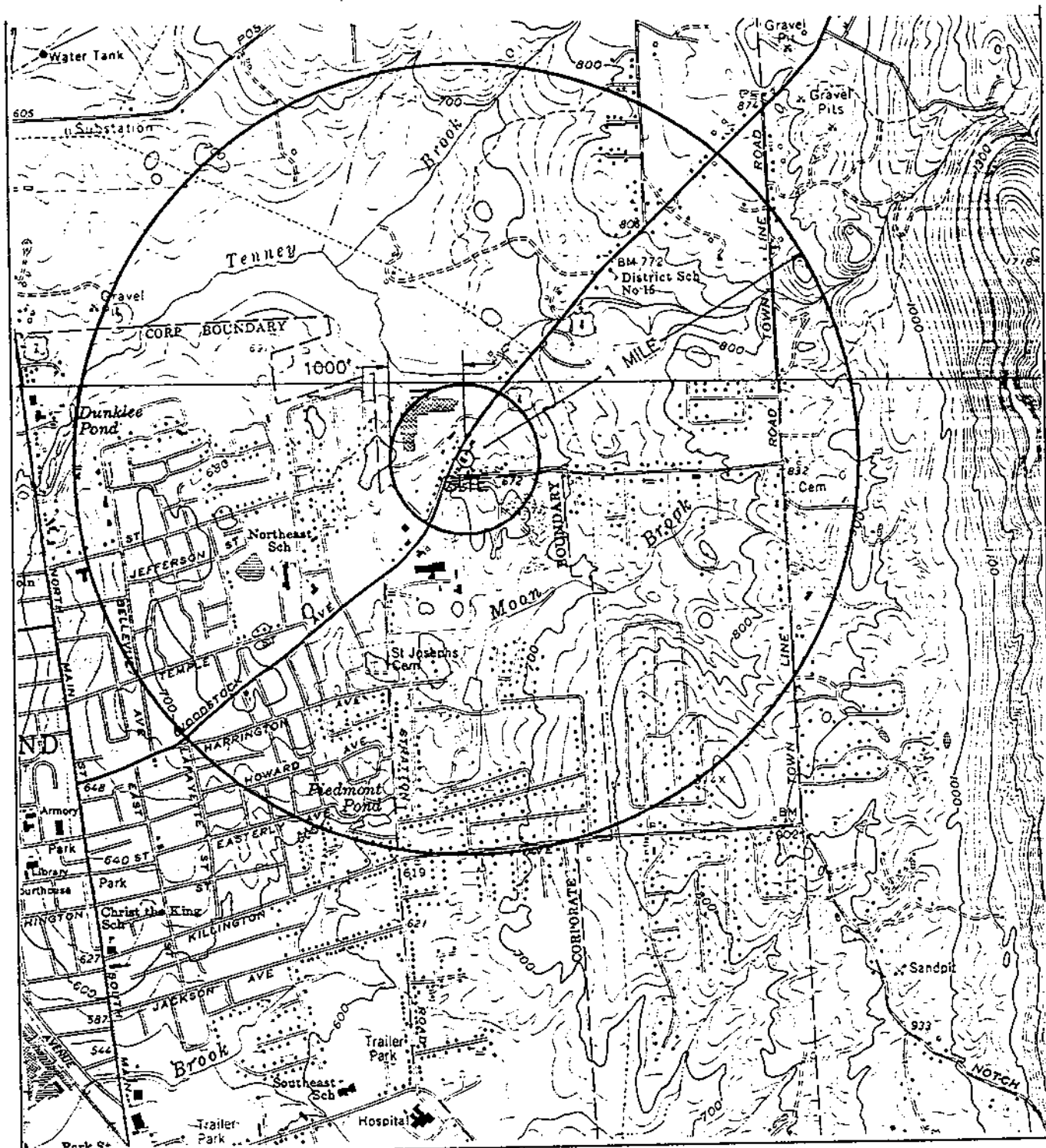
In accordance with our July 12, 1995 workplan prepared for the Vermont Department of Environmental Conservation's (VDEC) Hazardous Materials Management Division (HMMD), we have completed our initial site investigation of the Colonial Supply of Vermont property (the Site) located on Woodstock Avenue (U.S. Route 4) in Rutland, Vermont (Figure 1). Earlier this year, during the closure of a 550 gallon underground storage tank (UST) used to store diesel fuel, personnel of Precision Industrial Maintenance (the firm performing the UST closure) and the HMMD noted gasoline odors in the soils from 3.5 feet to 9 feet below grade. The soils at 3.5 feet below grade registered a peak volatile organic compound (VOC) vapor concentration of 224.8 parts per million (ppm) using a photoionization detector (PID). The concentration at nine feet below grade was 1186 ppm. It has been suggested that there may be an abandoned gasoline UST on the property that may be the source of the gasoline contamination.

In a letter dated June 26, 1995 to Mr. Lou Marozzi of the Albany, New York office of Colonial Plumbing and Heating, Mr. Richard Spiese of the HMMD requested that Colonial Plumbing and Heating retain a qualified consultant to perform a site investigation to further assess the conditions at the Site. The Johnson Company was contacted by Mr. Marozzi to prepare a workplan for the HMMD and perform a preliminary hydrogeologic investigation at the site. The Johnson Company's workplan was sent to the HMMD on July 12, 1995, and was approved by the HMMD in a letter to Mr. Marozzi from Ms. Linda Elliott dated July 18, 1995. Fieldwork associated with the preliminary site investigation was performed on July 31, 1995. A detailed description of the site investigation follows.

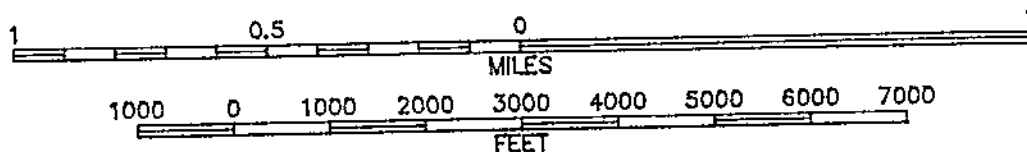
2.0 SITE INVESTIGATION

The preliminary site investigation consisted of the following tasks:

- Metal detector survey for identification of any abandoned USTs on the property.
- Receptor survey and limited risk assessment to determine the affect that any noted soil and groundwater contamination has on nearby receptors.
- Soil vapor screening and groundwater monitoring well installation at various locations on the property to help determine the source(s), degree, and extent of any contamination noted at the property.



NORTH



CONTOUR INTERVAL 20 FEET



BASE MAP : USGS 7.5 Minute Topographic Quadrangle: Rutland, VT 1961 photorevised 1988; and Chittenden, VT 1961.

FIGURE 1: Site Location Map
Colonial Supply of Vermont
Rutland, Vermont

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Environmental Sciences and Engineering
100 STATE STREET
MONTPELIER, VT 05602

The objectives of the investigation were to determine if one or more abandoned UST(s) exist on the property and to determine the degree and extent of soil and groundwater contamination at the property. Groundwater monitoring wells installed for this investigation provide a mechanism to monitor potential groundwater contamination concentrations over time.

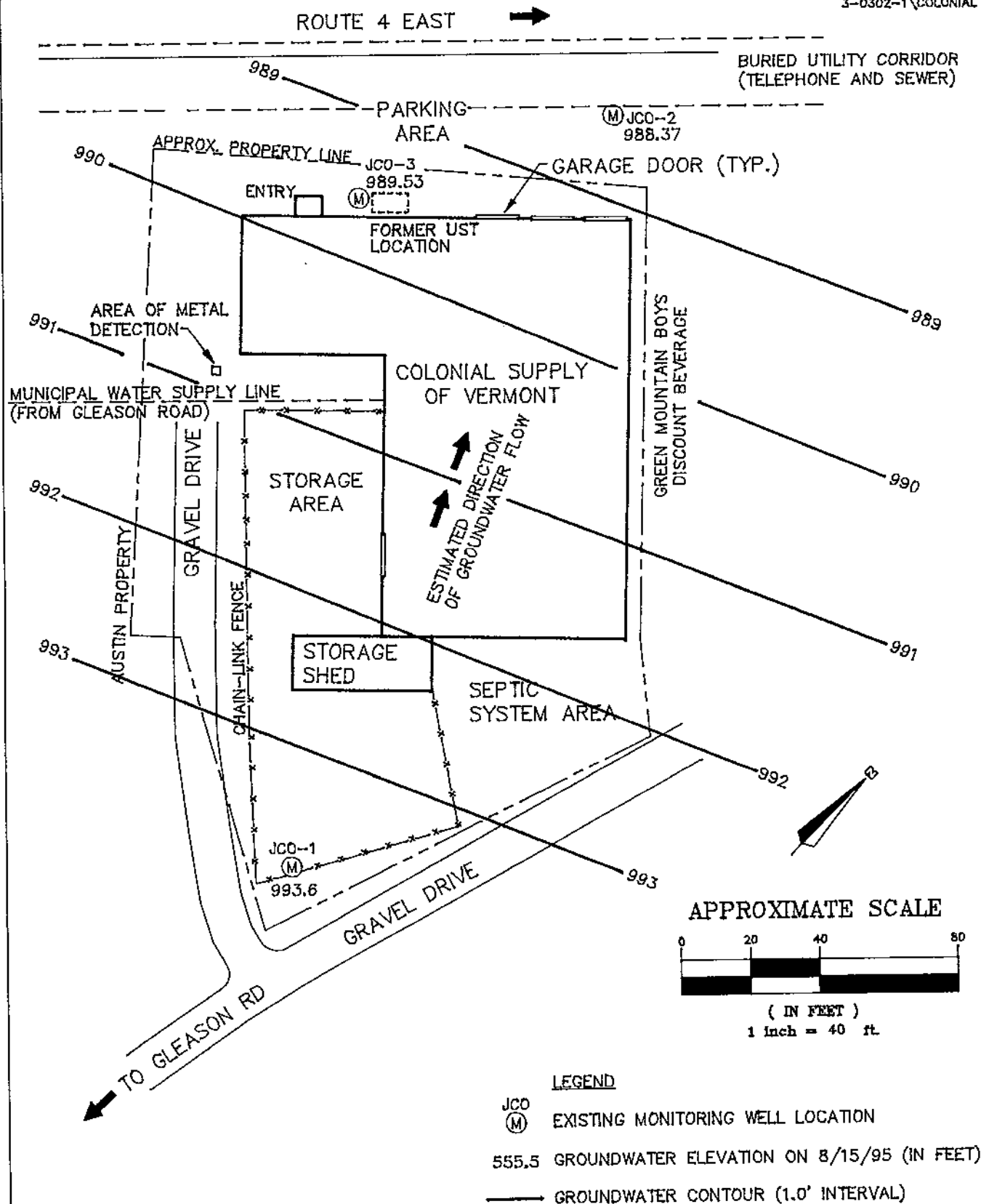
2.1 METAL DETECTOR SURVEY

We performed a metal detector survey of the exterior grounds of the Site by traversing the entire area of the exterior grounds while operating The Johnson Company's Fisher TW-6 metal detector. Other than detections near the edge of the building, presumably associated with steel reinforcement within the footers for the building's concrete slab foundation, only one small area of metal detection was noted. This two foot by three foot area is located approximately seven feet southwest of the westernmost rear corner of the building as shown on Figure 2. Although we do not know what underground structure caused a metal detection at this location, its small size indicates that it is probably not an underground storage tank.

2.2 RECEPTOR SURVEY/LIMITED RISK ASSESSMENT

The site is located in a heavily developed area primarily served by municipal sewer and water (although the Site has its own on-site wastewater disposal system located behind the southeast portion of the rear wall of the building). Underground telephone, a 10-inch diameter force main, and 8-inch diameter gravity sewer line are located in front of the building running parallel with Woodstock Avenue (Figure 2). The utility trench may act as a conduit causing preferential flow of groundwater and soil vapors. Any conduit groundwater flow would likely be towards the northeast judging by the slope of the road in front of the Site. The direction of vapor movement within the soils is dependent on pressure gradients within the unsaturated zone.

The building on the Site, and the building immediately to the east of the Site - Green Mountain Boys Discount Beverages - are both constructed on concrete slabs with no basements. The next building, located a few hundred feet east of the Site, is a newly constructed Taco Bell restaurant that also appears to be constructed on a concrete slab. Therefore, soil vapor migration into basements is not an issue with these properties. Two buildings to the west of the Site house three businesses:

**NOTE**

ALL DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

FIGURE 2
SITE SCHEMATIC AND GROUNDWATER CONTOUR MAP
COLONIAL SUPPLY OF VERMONT
RUTLAND, VERMONT

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Carroccia's Auto Service, and Boot and Blade are both located in the building at the corner of Woodstock Avenue and Gleason Road; Stitches Plus is located in the building immediately to the west of the Site. There is also at least one apartment in the walk-out basement of the building where Stitches Plus is located. This apartment is served by an on-site water supply well. Both buildings are owned by the same owner, Mr. Gary Austin.

The building where Carroccia's Auto Service, and Boot and Blade are currently housed, was operated formerly as a gasoline service station (most recently an Exxon station) for several years until the USTs were removed approximately five years ago. Contaminated soils associated with the UST removals were stockpiled adjacent to Colonial Supply of Vermont's property line for a period of approximately two years according to Mr. Joe Zingale (Town of Rutland Sewer and Water Administrator), Ms. Barbara (last name unknown) of Colonial Supply of Vermont, and Mr. Ray Daper who is the tenant of the neighboring basement apartment. Mr. Daper also indicated that the soils were spread on-site behind the building and adjacent to the Site's property, presumably when it was acceptable to reuse the soils on-site. The area is currently planted in grass. The former presence of a soil stockpile indicates that petroleum products had leaked from one or more of the USTs, or their associated fittings, at the former gasoline station.

2.3 SOIL SCREENING AND MONITORING WELL INSTALLATION

We oversaw the installation of three groundwater monitoring wells at the Site to enable soil screening and groundwater sampling at locations indicated on Figure 2 on July 31, 1995. The monitoring wells were installed by Adams Engineering of Underhill, Vermont using their pickup truck-mounted vibratory coring rig. Soil samples for VOC vapor screening were collected by Adams Engineering at each of the monitoring well locations.

2.3.1 Soil Screening

We performed headspace readings using a PID on the soil samples collected during the installation of each of the monitoring wells. To do so, we collected soils in re-sealable plastic bags and, after initial massaging to loosen any clumps of soil, the bagged soils were allowed to sit for several minutes. We then inserted the tip of the PID into the headspace in the plastic bag and recorded the resultant PID reading. We calibrated the PID, a Thermo-Environmental, Inc. Model 580B OVM, to 101.5 ppm isobutylene before use. No soil samples were collected for laboratory analysis.

2.3.2 Monitoring Well Installation

We completed the boreholes to a depth that would ensure that the groundwater surface would fall within the factory-slotted screen when we placed the monitoring well in the borehole. We constructed all permanent monitoring wells using 1½-inch diameter PVC with 0.010-inch factory slotted screens. In all cases, a sand pack was emplaced around the screened interval to the extent possible, and a bentonite grout seal was emplaced in the annular space to preclude conduit flow of surface water into the wells. Well logs for the monitoring wells are included in Appendix A. After completion, we field located all wells on the Site via measurements from nearby structures and Adams Engineering surveyed the relative top-of-casing elevations.

2.4 **GROUNDWATER SAMPLING AND FLOW DIRECTION DETERMINATION**

On August 23, 1995, 23 days after the installation of the monitoring wells, we measured the water levels in each of the monitoring wells and collected groundwater samples for laboratory analysis VOC using EPA Method 8260.

We collected groundwater samples from the three monitoring wells using a one-inch diameter PVC bailer that was decontaminated after sampling each well. We used the methodology outlined in The Johnson Company's Standard Operating Procedure JCO-SOP-008 to sample each of the wells. All groundwater samples were delivered to Scitest Laboratory Services of Randolph, Vermont for the previously mentioned analysis. We collected a duplicate sample from monitoring well MW-JCO-3 and submitted a trip blank for analysis for quality assurance/quality control purposes.

In the course of the groundwater sampling, we measured the water levels in the three monitoring wells located on the Site using an electronic water level indicator. Using this information, and the survey data that was previously collected, we developed a groundwater contour map of the Site. The resultant groundwater contours can be noted on Figure 2.

3.0 RESULTS

3.1 SOIL SCREENING

Soils screened during the installation of the monitoring wells showed only slightly elevated PID readings of less than three ppm above background at monitoring wells MW-JCO-1 and MW-JCO-3. Highly elevated readings were noted at MW-JCO-2, where we also noted an organic chemical odor during the well's installation and sampling. The highest PID reading that we recorded was 271 ppm. This reading was obtained near the groundwater table indicating lateral migration of contaminants in groundwater. The background ambient air PID reading was 1.3 ppm when the PID was calibrated. The PID screening results can be noted on the monitoring well logs included in Appendix A. The on-site soils include silt, sand, and subangular pebbles. A very fine sand was observed from 5 to 15 feet below ground surface at the location of monitoring well MW-JCO-2.

3.2 GROUNDWATER SAMPLING

Results of the groundwater sample analyses are summarized in Table 1. Complete analytical results are included in Appendix B.

TABLE 1 GROUNDWATER ANALYTICAL RESULTS SUMMARY (µg/L)					
Analyte	MW JCO-1	MW JCO-2	MW JCO-3	MW-JCO-D	Standard
Benzene	<1.0	18,100	<1.0	<1.0	1 [†]
1,2-Dichloroethane (Ethylene Dichloride)	<1.0	4,700	<1.0	<1.0	0.4 [†]
Ethylbenzene	<1.0	1,810	<1.0	<1.0	680 [‡]
Xylenes	<2.0	9,570	<2.0	<2.0	200 [‡]
Acetone	<10	9,880	<10	<10	700 [†]
2-Butanone (Methyl Ethyl Ketone)	<10	49,000	<10	<10	85 [‡]
2-Hexanone (Methyl Butyl Ketone)	<10	1,560	<10	<10	no standard
4-Methyl-2-Pentanone (Isopropylacetone)	<10	1,360	<10	<10	no standard
1,2-Dibromoethane (Ethylene Dibromide)	<1.0	1,430	<1.0	<1.0	0.001 [‡]
Naphthalene	<2.0	359	<2.0	<2.0	20 [†]
n-Propylbenzene	<1.0	124	<1.0	<1.0	no standard

TABLE 1 GROUNDWATER ANALYTICAL RESULTS SUMMARY (µg/L)					
Analyte	MW JCO-1	MW JCO-2	MW JCO-3	MW-JCO-D	Standard
1,2,4-Trimethylbenzene (Pseudocumene)	<1.0	1,180	<1.0	<1.0	5 [†]
1,3,5-Trimethylbenzene (Mesitylene)	<1.0	329	<1.0	<1.0	4 [†]
Toluene	12	21,800	<1.0	<1.0	1,000*
Methyl Tertiary Butyl Ether	2.6	<100	<1.0	<1.0	40 [†]
Standards presented are the LOWEST of the following: Vermont Groundwater Enforcement Standard (§); Federal Maximum Contaminant Level (*), a drinking water standard; and Vermont Health Advisory (†), a drinking water standard. MW JCO-D is a duplicate of MW JCO-3. µg/L = micrograms per liter (parts per billion)					

As can be noted, concentrations of each of the compounds in the groundwater sample from monitoring well MW-JCO-2 exceed the corresponding standards in all cases except, possibly, for Methyl Tertiary Butyl Ether (MTBE). Due to high concentrations of compounds in this sample, the laboratory detection limit for MTBE was raised above its regulatory standard. Exceedences of standards are not noted for any of the EPA Method 8260 compounds in the groundwater samples from monitoring wells MW-JCO-1 and MW-JCO-3.

3.2.1 Groundwater Flow Direction

Based on the measured depth to groundwater from each of the three monitoring wells on the Site, we developed a groundwater table contour map. The groundwater contours are presented on Figure 2 and elevation data are included in Table 2.

Table 2 : Monitoring Well Elevation Summary		
Monitoring Well	TOC Elevation (ft)	8/15/95 Water Elevation (ft)
MW-JCO-1	998.40	993.60
MW-JCO-2	998.73	988.37
MW-JCO-3	1000.00	989.53
Notes: Elevations are relative to an assumed datum of 1000.00 feet at MW-JCO-3 TOC TOC = Top of Casing		

Based on the groundwater surface elevations, the groundwater beneath the Site is flowing towards the north-northwest with a gradient of two percent. Therefore, the primary migration pathway of any groundwater contamination at the Site is the conduit created by the utility trench that passes in front of the building located on the Site, parallel to Woodstock Avenue. Flow in this conduit would likely be towards the northeast.

4.0 DISCUSSION

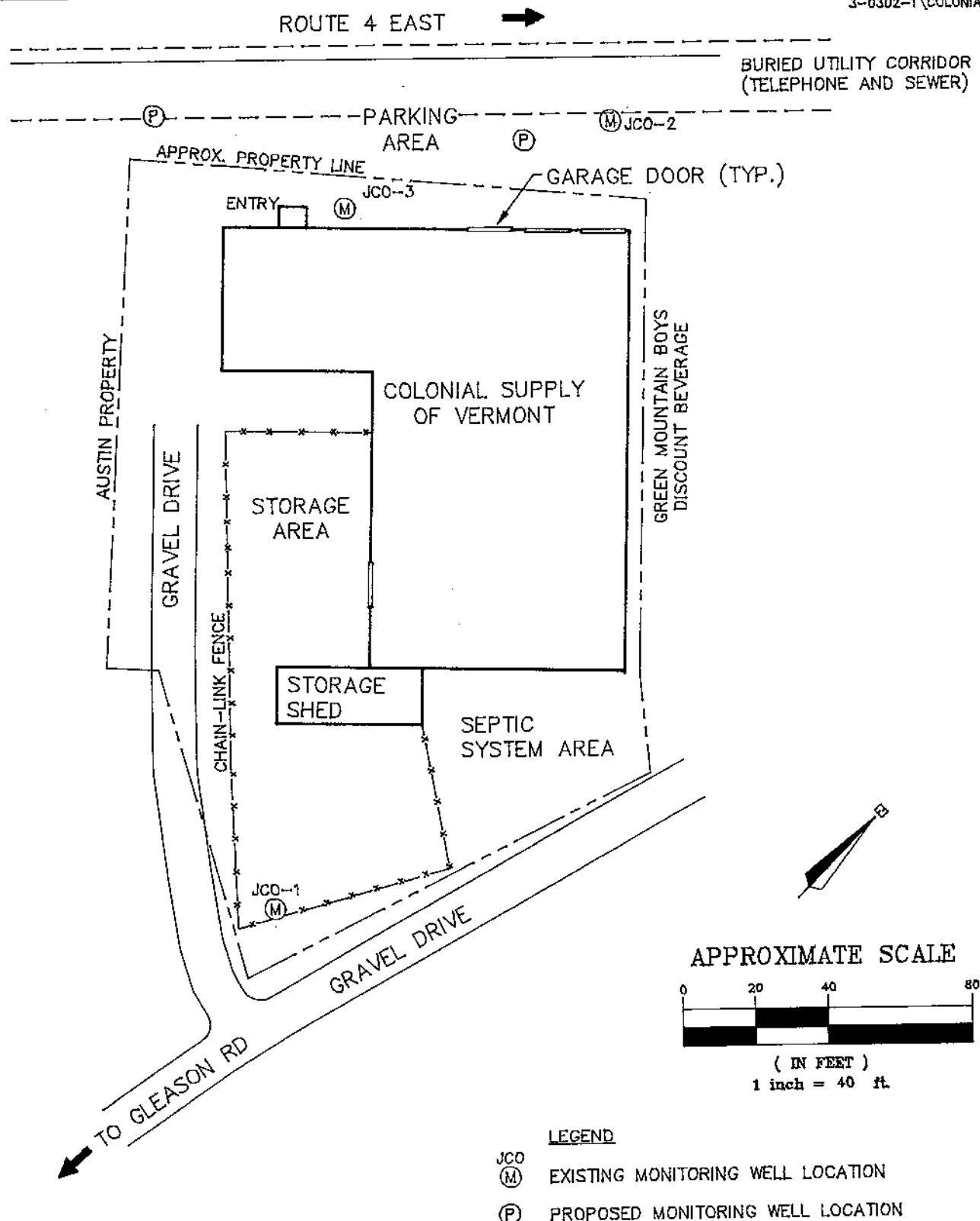
Groundwater samples collected from the upgradient monitoring well (MW-JCO-1) and the monitoring well in the vicinity of where the 550-gallon diesel UST had been located (MW-JCO-3) indicate minimal groundwater contamination exists in these areas. Detections of toluene and MTBE in monitoring well MW-JCO-1 are well below the regulatory standards established for these compounds. The groundwater sample from monitoring well MW-JCO-2 located along the edge of the conduit created by the utility trench along the edge of Woodstock Avenue exhibits high concentrations of several VOC. In addition to benzene, toluene, ethylbenzene, and xylenes (BTEX) which are commonly noted components of gasoline and other petroleum compounds, other VOC are noted that are used as solvents, components of anti-knock gasolines (ethylene dibromide), as resins, and in petroleum products. Because these contaminants are noted only in the groundwater sample collected from the monitoring well located at the edge of the conduit created by the underground utilities, these contaminants may be originating from a source(s) other than the Colonial Supply of Vermont property. One possible source of the contaminants noted is the former gasoline service station and current auto repair business currently known as Carroccia's Auto Service located on the adjacent property to the southwest of the Site (Austin property).

It should be noted that monitoring well MW-JCO-2 may be located off the Colonial Supply of Vermont property and in the right-of-way of Woodstock Avenue. Because a precise property survey was not performed for this investigation, as it is beyond its scope, we can not definitely state whether monitoring well MW-JCO-2 is on or off the Colonial Supply of Vermont property. Additionally, it is interesting to note that the groundwater sample collected from monitoring well MW-JCO-3, located adjacent to the UST excavation where gasoline odors were noted by Precision Industrial Maintenance and HMMD personnel during the removal of the former UST, contained no VOC above laboratory detection limits. This suggests that any contamination in the vicinity of the former UST may be limited in extent.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the preliminary hydrogeologic investigation, the groundwater samples collected from the two monitoring wells that are definitely on the Colonial Supply of Vermont property are not contaminated by VOC above applicable standards. The groundwater sample collected from monitoring well MW-JCO-2, which may or may not be located on Colonial Supply of Vermont property, is contaminated with several VOC above regulatory standards. Because this well is located along the edge of a conduit created by the trench in which buried utilities are located, the noted contaminants may be from an off-site source, likely located to the southwest along the same (east) side of Woodstock Avenue.

We recommend the installation of two additional monitoring wells to help further define the nature and extent of groundwater contamination by VOC at the Site. One well should be located hydraulically downgradient of the former UST location, but out of the conduit created by the buried utility trench. This will help determine whether VOC contamination attributable to the former UST exists on the Colonial Supply of Vermont property. The second additional monitoring well should be located along the edge of the conduit created by the buried utility trench as close to the southwest corner of the Site as possible. This will help determine whether groundwater within the conduit is contaminated with VOC as it enters the Site, thereby helping to determine the likelihood of an off-site contamination source. These proposed monitoring wells should be installed at similar depths of the existing monitoring wells. Proposed well locations can be noted on Figure 3. Additionally, we recommend that the water supply well on the Austin property be sampled and analyzed for the presence of VOC.



NOTE
ALL DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

FIGURE 3
PROPOSED GROUNDWATER MONITORING WELL LOCATIONS
COLONIAL SUPPLY OF VERMONT
RUTLAND, VERMONT

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APPENDIX A
Monitoring Well Logs

The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # MW-JCO-1

Project: Colonial Supply of VT
Location: Woodstock Ave, Rutland, VT
Job # 3-0302-1
Logged By: ERH
Date Drilled: 7/31/95
Driller: Adams Engineering
Drill Method: Vibratory Coring

Casing Type: PVC
Casing Diameter: 1.5 in.
Casing Length: 4.5 ft.
Screen Type: PVC
Screen Diameter: 1.5 in.
Screen Length: 5.0 ft.
Slot Size: .010"

Total Pipe: 9.5 ft.
Stick Up: -0.4 ft.
Total Hole Depth: 13.0 ft.
Well Guard Length: 1.0 ft.
Initial Water Level: 5.2 ft.
Surface Elevation: -
T.O.C. Elevation: 998.40

■ = Sampled Interval

Sheet 1 of 1

Depth (feet)	Well Construction	Notes	Geology	PID Reading	Description
5					
4					
3					
2					
1					
0		Well Guard			
		Cement		0.8	0-.4': lt grysh brn, hum, v fri, med
1		Backfill		2.1	snd loam w/subang pebs.
		Bentonite		2.5	
2				2.8	.4-.9': lt brn, hum, v fri, med slty
		Sand Pack			snd w/subang pebs.
3					
4					.9-1.5: gry, hum, v fri, fn snd w/sm
					subang pebs.
5				0.0	1.5-1.9': lt brn, hum, v fri, fn-med
					slty snd w/rnd pebs & stones upto
6					2" dia.
		Screen			
7					1.9-2.5': Olive gry, dmp, firm sndy
		Backfill			slt w/some subang pebs.
8					
9					5-5.6': Grysh brn, sat, frm-in-plce,
					med slty snd w/subang pebs & stones
10				3.0	upto 3" dia.
					10-10.5': Olive brn, sat, fri, med
11					slty snd w/subang pebs & stones.
12					
13					
14					
15					
16					
17					

DRILLING LOG
WELL # MW-JCO-2

Total Pipe: 16.5 ft.
Stick Up: -0.3 ft.
Total Hole Depth: 17.5 ft.
Well Guard Length: 1.0 ft.
Initial Water Level: 10.6 ft.
Surface Elevation: -
T.O.C. Elevation: 998.73

Δt = Sampled Interval

Depth (feet)	Well Construction	Notes	Geology	PID Reading	Description
5					
4					
3					
2					
1					
0	Well Guard Cement Bentonite			2.4	0-9': lt brn, hum, v fri, v fn snd w/few subang stones.
1				2.4	
2	Backfill			4.0	.9-1.3': as above w/some rdsh brn v fn snd.
3					
4					1.3-3.7': lt grysh brn, hum, v fri, v fn slty snd w/few subang stones.
5					
6					
7	Sand Pack			2.6-74/67	5.2-9': lt brn, hum-sat (@~9') fri, v fn snd, VOC odor in sat mt'l. Higher PID readings are in sat mt'l.
8					
9					
10					
11				271/225	10-12.6': lt brn, sat, frm-in-plce, v fn snd w/tr slt & subang pebs & stones.
12					
13	Backfill				
14					
15	Screen				
16				213	15-17.5': olve brn, sat, fri, fn slty snd w/subang pebs & stones.
17					

The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # MW-JCO-3

Project: Colonial Supply of VT
Location: Woodstock Ave, Rutland, VT
Job # 3-0302-1
Logged By: ERH
Date Drilled: 7/31/95
Driller: Adams Engineering
Drill Method: Vibratory Coring

Casing Type: PVC
Casing Diameter: 1.5 in.
Casing Length: 7.0 ft.
Screen Type: PVC
Screen Diameter: 1.5 in.
Screen Length: 10.0 ft.
Slot Size: .010"

Total Pipe: 17.0 ft.
Stick Up: -0.3 ft.
Total Hole Depth: 17.5 ft.
Well Guard Length: 1.0 ft.
Initial Water Level: 10.8 ft.
Surface Elevation: -
T.O.C. Elevation: 1000.00

■ = Sampled Interval

Sheet 1 of 1

Depth (feet)	Well Construction	Notes	Geology	PID Reading	Description
5					
4					
3					
2					
1					
0		Well Guard			
0		Cement			
1				4.6	0-2': brn, hum, v fri, fn slty snd w/subang pebs & stones - backfill.
2		Backfill			
3					
4		Bentonite			
5				0.6	5-7.5': olve brn, dmp-sat, fri, fn slty snd w/some subang pebs & stones.
6					
7		Sand Pack			
8					
9					
10					10-14': olve brn, sat, fri, fn slty snd w/few subang pebs.
11				0.8	
12					
13		Backfill			
14					
15		Screen		1.2/1.0	15-17.5': olve brn, sat, fri, fn slty snd w/few subang pebs & stones.
16					
17					

APPENDIX B
Analytical Results



SCITEST
LABORATORY SERVICES

ANALYTICAL REPORT

P.O. Box 339
Randolph, Vermont 05060-0339
(802) 728-6313

The Johnson Company
100 State Street
Montpelier, VT 05602

Warren Davey

Project Name: Colonial Supply
Customer Nos.: 078611

RECEIVED

SEP 27 1995

JOHNSON CO. INC.
MONTPELIER, VT

Work Order No.: 9508-00187

Date Received: 8/24/95
Date Reported: 9/26/95

Sample Desc.: JCO-1

Sample Date: 8/23/95

Test Performed

Method

Collection Time: 8:05

Results

Units

Analyst Analysis Date

Volatiles	EPA 8260			RJS	8/25/95
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Benzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromoform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Acetone	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Butanone (MEK)	EPA 8260	< 10	ug/L	RJS	8/25/95

ANALYTICAL REPORT

Project Name: Colonial Supply

Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-1

Sample Date: 8/23/95

Collection Time: 8:05

Test Performed	Method	Results	Units	Analyst	Analysis Date
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Hexanone	EPA 8260	< 10	ug/L	RJS	8/25/95
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Styrene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
n-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
sec-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
tert-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
cis 1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Hexachlorobutadiene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Isopropylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
p-Isopropyltoluene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Naphthalene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
n-Propylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,3-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,4-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,4-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3,5-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Toluene	EPA 8260	12	ug/L	RJS	8/25/95
Surrogate:				RJS	8/25/95
***Dibromofluoromethane		94.2	% Recovery	RJS	8/25/95
***Toluene-d8		97.8	% Recovery	RJS	8/25/95
***Bromofluorobenzene		89.7	% Recovery	RJS	8/25/95
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methyl Tertiary Butyl Ether	EPA 8260	2.6	ug/L	RJS	8/25/95

ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-2

Sample Date: 8/23/95

Test Performed

Method

Collection Time: 8:40

Results

Units

Analyst

Analysis Date

Volatiles	EPA 8260			RJS	8/25/95
Carbon tetrachloride	EPA 8260	< 100	ug/L	RJS	8/25/95
Bromomethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Benzene	EPA 8260	18,100	ug/L	RJS	8/25/95
trans-1,3-Dichloropropene	EPA 8260	< 100	ug/L	RJS	8/25/95
trans-1,2-Dichloroethene	EPA 8260	< 100	ug/L	RJS	8/25/95
1,2-Dichloropropane	EPA 8260	< 100	ug/L	RJS	8/25/95
1,2-Dichloroethane	EPA 8260	4,700	ug/L	RJS	8/25/95
1,2-Dichlorobenzene (ortho)	EPA 8260	< 100	ug/L	RJS	8/25/95
1,1-Dichloroethene	EPA 8260	< 100	ug/L	RJS	8/25/95
1,1-Dichloroethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Trichloroethene (TCE)	EPA 8260	< 100	ug/L	RJS	8/25/95
1,1,2-Trichloroethane	EPA 8260	< 100	ug/L	RJS	8/25/95
1,1,1-Trichloroethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Ethylbenzene	EPA 8260	1,810	ug/L	RJS	8/25/95
Tetrachloroethene (PCE)	EPA 8260	< 100	ug/L	RJS	8/25/95
1,1,2,2-Tetrachloroethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Chloromethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Dibromomethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Chloroform	EPA 8260	< 100	ug/L	RJS	8/25/95
Bromoform	EPA 8260	< 100	ug/L	RJS	8/25/95
Bromodichloromethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Chlorobenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
Chloroethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Methylene chloride	EPA 8260	< 100	ug/L	RJS	8/25/95
Trichlorofluoromethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Vinyl Chloride	EPA 8260	< 100	ug/L	RJS	8/25/95
Dibromochloromethane	EPA 8260	< 100	ug/L	RJS	8/25/95
o-Xylene	EPA 8260	3,070	ug/L	RJS	8/25/95
Dichlorodifluoromethane	EPA 8260	< 100	ug/L	RJS	8/25/95
Xylenes-m,p	EPA 8260	6,500	ug/L	RJS	8/25/95
Acetone	EPA 8260	9,880	ug/L	RJS	8/25/95
2-Butanone (MEK)	EPA 8260	49,000	ug/L	RJS	8/25/95
Carbon disulfide	EPA 8260	< 1,000	ug/L	RJS	8/25/95
2-Hexanone	EPA 8260	1,560	ug/L	RJS	8/25/95
4-Methyl-2-Pentanone (MIBK)	EPA 8260	1,360	ug/L	RJS	8/25/95
Styrene	EPA 8260	< 200	ug/L	RJS	8/25/95
1,2,3-Trichloropropane	EPA 8260	< 100	ug/L	RJS	8/25/95
Bromobenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
Bromochloromethane	EPA 8260	< 100	ug/L	RJS	8/25/95

ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-2

Sample Date: 8/23/95

Collection Time: 8:40

Test Performed	Method	Results	Units	Analyst	Analysis Date
n-Butylbenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
sec-Butylbenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
tert-Butylbenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
2-Chlorotoluene (ortho)	EPA 8260	< 100	ug/L	RJS	8/25/95
4-Chlorotoluene (para)	EPA 8260	< 100	ug/L	RJS	8/25/95
1,2-Dibromo-3-Chloropropane	EPA 8260	< 200	ug/L	RJS	8/25/95
1,2-Dibromoethane (EDB)	EPA 8260	1,430	ug/L	RJS	8/25/95
1,3-Dichlorobenzene (meta)	EPA 8260	< 100	ug/L	RJS	8/25/95
1,4-Dichlorobenzene (para)	EPA 8260	< 100	ug/L	RJS	8/25/95
cis 1,2-Dichloroethene	EPA 8260	< 100	ug/L	RJS	8/25/95
1,3-Dichloropropane	EPA 8260	< 100	ug/L	RJS	8/25/95
2,2-Dichloropropane	EPA 8260	< 100	ug/L	RJS	8/25/95
1,1-Dichloropropene	EPA 8260	< 100	ug/L	RJS	8/25/95
Hexachlorobutadiene	EPA 8260	< 100	ug/L	RJS	8/25/95
Isopropylbenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
p-Isopropyltoluene	EPA 8260	< 100	ug/L	RJS	8/25/95
Naphthalene	EPA 8260	359	ug/L	RJS	8/25/95
n-Propylbenzene	EPA 8260	124	ug/L	RJS	8/25/95
1,1,1,2-Tetrachloroethane	EPA 8260	< 100	ug/L	RJS	8/25/95
1,2,3-Trichlorobenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
1,2,4-Trichlorobenzene	EPA 8260	< 100	ug/L	RJS	8/25/95
1,2,4-Trimethylbenzene	EPA 8260	1,180	ug/L	RJS	8/25/95
1,3,5-Trimethylbenzene	EPA 8260	329	ug/L	RJS	8/25/95
Toluene	EPA 8260	21,800	ug/L	RJS	8/25/95
Surrogate:				RJS	8/25/95
***Dibromofluoromethane		103	% Recovery	RJS	8/25/95
***Toluene-d8		97.4	% Recovery	RJS	8/25/95
***Bromofluorobenzene		96.7	% Recovery	RJS	8/25/95
cis-1,3-Dichloropropene	EPA 8260	< 100	ug/L	RJS	8/25/95
Methyl Tertiary Butyl Ether	EPA 8260	< 100	ug/L	RJS	8/25/95

Sample Desc.: JCO-3

Sample Date: 8/23/95

Collection Time: 7:10

Test Performed	Method	Results	Units	Analyst	Analysis Date
Volatiles	EPA 8260			RJS	8/25/95
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Benzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95



ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-3

Sample Date: 8/23/95

Test Performed

Method

Collection Time: 7:10

Results

Units

Analyst Analysis Date

trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromoform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Acetone	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Butanone (MEK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Hexanone	EPA 8260	< 10	ug/L	RJS	8/25/95
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Styrene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
n-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
sec-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
tert-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95



ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-3

Sample Date: 8/23/95

Test Performed

Method

Collection Time: 7:10

Results

Units

Analyst

Analysis Date

4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
cis 1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Hexachlorobutadiene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Isopropylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
p-Isopropyltoluene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Naphthalene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
n-Propylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,3-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,4-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,4-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3,5-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Toluene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Surrogate:					
***Dibromofluoromethane		92.1	% Recovery	RJS	8/25/95
***Toluene-d8		108.	% Recovery	RJS	8/25/95
***Bromofluorobenzene		92.4	% Recovery	RJS	8/25/95
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methyl Tertiary Butyl Ether	EPA 8260	< 1.0	ug/L	RJS	8/25/95

Sample Desc.: JCO-D

Sample Date: 8/23/95

Test Performed

Method

Collection Time: 7:12

Results

Units

Analyst

Analysis Date

Volatiles	EPA 8260			RJS	8/25/95
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Benzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95



ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-D

Sample Date: 8/23/95

Collection Time: 7:12

Test Performed

Method

Results

Units

Analyst Analysis Date

1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromoform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Acetone	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Butanone (MEK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Hexanone	EPA 8260	< 10	ug/L	RJS	8/25/95
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Styrene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
n-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
sec-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
tert-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	8/25/95

ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: JCO-D
Sample Date: 8/23/95
Test Performed

Collection Time: 7:12
Results Units

Analyst Analysis Date

Method	Results	Units	Analyst	Analysis Date
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS 8/25/95
cis 1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,3-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
2,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,1-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Hexachlorobutadiene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Isopropylbenzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
p-Isopropyltoluene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Naphthalene	EPA 8260	< 2.0	ug/L	RJS 8/25/95
n-Propylbenzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,1,1,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,2,3-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,2,4-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,2,4-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,3,5-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Toluene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Surrogate:				
***Dibromofluoromethane	91.9	% Recovery	RJS	8/25/95
***Toluene-d8	95.4	% Recovery	RJS	8/25/95
***Bromofluorobenzene	92.9	% Recovery	RJS	8/25/95
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Methyl Tertiary Butyl Ether	EPA 8260	< 1.0	ug/L	RJS 8/25/95

Sample Desc.: Trip Blank
Sample Date: 8/11/95
Test Performed

Collection Time: 14:15
Results Units

Analyst Analysis Date

Method	Results	Units	Analyst	Analysis Date
Volatiles	EPA 8260		RJS	8/25/95
Carbon tetrachloride	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Bromomethane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Benzene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
trans-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
trans-1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,2-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,2-Dichlorobenzene (ortho)	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,1-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS 8/25/95
1,1-Dichloroethane	EPA 8260	< 1.0	ug/L	RJS 8/25/95
Trichloroethene (TCE)	EPA 8260	< 1.0	ug/L	RJS 8/25/95

ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: Trip Blank

Sample Date: 8/11/95

Collection Time: 14:15

Test Performed	Method	Results	Units	Analyst	Analysis Date
1,1,2-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1-Trichloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Ethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Tetrachloroethene (PCE)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,2,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromomethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromoform	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromodichloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Chloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methylene chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Trichlorofluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Vinyl Chloride	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Dibromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
o-Xylene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Dichlorodifluoromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Xylenes-m,p	EPA 8260	< 2.0	ug/L	RJS	8/25/95
Acetone	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Butanone (MEK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Carbon disulfide	EPA 8260	< 10	ug/L	RJS	8/25/95
2-Hexanone	EPA 8260	< 10	ug/L	RJS	8/25/95
4-Methyl-2-Pentanone (MIBK)	EPA 8260	< 10	ug/L	RJS	8/25/95
Styrene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2,3-Trichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Bromochloromethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
n-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
sec-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
tert-Butylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2-Chlorotoluene (ortho)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
4-Chlorotoluene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2-Dibromo-3-Chloropropane	EPA 8260	< 2.0	ug/L	RJS	8/25/95
1,2-Dibromoethane (EDB)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichlorobenzene (meta)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,4-Dichlorobenzene (para)	EPA 8260	< 1.0	ug/L	RJS	8/25/95
cis 1,2-Dichloroethene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
2,2-Dichloropropane	EPA 8260	< 1.0	ug/L	RJS	8/25/95

ANALYTICAL REPORT

Project Name: Colonial Supply
Project No.: 078611

Work Order No.: 9508-00187

Sample Desc.: Trip Blank

Sample Date: 8/11/95

Collection Time: 14:15

Test Performed	Method	Results	Units	Analyst	Analysis Date
1,1-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Hexachlorobutadiene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Isopropylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
p-Isopropyltoluene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Naphthalene	EPA 8260	< 2.0	ug/L	RJS	8/25/95
n-Propylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,1,1,2-Tetrachloroethane	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,3-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,4-Trichlorobenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,2,4-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
1,3,5-Trimethylbenzene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Toluene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Surrogate:				RJS	8/25/95
***Dibromofluoromethane		91.4	% Recovery	RJS	8/25/95
***Toluene-d8		109.	% Recovery	RJS	8/25/95
***Bromofluorobenzene		87.2	% Recovery	RJS	8/25/95
cis-1,3-Dichloropropene	EPA 8260	< 1.0	ug/L	RJS	8/25/95
Methyl Tertiary Butyl Ether	EPA 8260	< 1.0	ug/L	RJS	8/25/95

Authorized by:

